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| Theory | Behaviorist Learning Theory | Cognitivist Learning Theory |
| List 5 fundamental beliefs of the proponents of each theory.  Behavorist Theory Belief = any behavior that cannot be described in overt terms is unscientific (Saettler, p. 288)  Cognitivist Theory Belief = emphasis on knowing rather than responding, stresses mental structure or organization, and views the individual as active, constructive and problem solving rather than a passive recipient of environmental stimulation (Saettler, p. 318) | 1. Skinner: behavior of the learner and its reinforcement by electronic or mechanical means.  2. W.W. Charters: take one group and break it down into subgroups until one could determine the type of activities to be performed  3. Tyler’s four steps:  A. What educational purposes should the school seek to attain  B. What educational experiences should can be provided that are likely to attain these purposes  C. How can these educational experiences be effectively organized.  D. How can we determine whether these purposes can be attained.  4. Bloom’s Taxonomy:  A. Knowledge  B. Comprehension  C. Application  D. Analysis  E. Synthesis  F. Evaluation  5. Gagne performance objectives model:  (based on Mager’s military/industrial approach)   1. Action 2. Object 3. Situation 4. Tools and constraints 5. Capability to be learned   6. Keller Plan: grew out of Skinnerian concepts/did not include teaching machines  A. The “go at your own pace” feature  B. The unit perfection requirement for advance  C. The use of lectures and demonstrations as vehicles of motivation  D. The related stress on the written word in teacher-student communications  E. The related stress on the written word in teacher-student communications  F. The use of proctors | 1. Greeks (Plato & Aristotle): speculated on memory and thought and discussed the nature and origin of knowledge  2. W. Wundt: scientific study involving introspection *the ordinary act of introspection was untrustworthy because it applied only to some kind of unique experience in the past* (Saettler, p. 320) The kind of introspection Wundt advocated later came to be known as “Ganzheit” or holistic psychology  3. Gestaltists: concentrated on constructive aspects of thinking and holistic solutions.  4. Gardner (5 features p. 322)  A. when talking about human activities it is necessary to speak about mental representation and to posit a level of analysis wholly separate from the biological or neurological…and the sociological or cultural.  B. central to any understanding of the human mind is the electronic computer  C. the deliberate decision to de-emphasize certain factors which may be important for cognitive functioning but whose inclusion at this point would unnecessarily complicate the cognitive/scientific enterprise.  D. much is to be obtained from interdisciplinary studies….some day the boundaries …may become attenuated or perhaps disappear altogether yielding a single unified cognitive science.  E. more controversial feature…a key ingredient in contemporary cognitive science is the agenda of issues…it is virtually unthinkable that cognitive science could exist, let alone in its current form, had there not been a philosophical tradition dating back to the time of the Greeks. (Saettler, p. 322)  5. Piaget: Two Techniques:  A. Creating a free – problem solving situation whereby the learner selects a task and is free to do what he likes to complete it.  B. A constructive analysis wherein a class of tasks and activities are chosen and their cognitive demands are analyzed. |
| List 3 basic assumptions about learning within each theory. | 1. Positive reinforcement motivation  2. Learning tools are needed whether they are machines or lectures  3. Gradient achievement | 1. Knowledge attained through human activities  2. Constructive positivism  3. Scientific approach to learning |
| List 3 strengths of each theory in terms of educational technology. | 1. Communication tools  2. Inclusion of teacher facilitation  3. Student based education focus | 1. Study of human thinking and knowing  2. Correlation between Knowledge and Action  3. Understanding the process of knowledge and learning |
| List 3 weaknesses of each theory in terms of educational technology. | 1. Difficulty in measuring individual achievement  2. Too much reliance on electronic devices  3. Human error when programming technology for behavioral measurement | 1. Difficult to measure individual modes of knowing  2. The mind is a difficult thing to analyze individually or collectively  3. Structured research is difficult to maintain in a scientific laboratory |
| Which learning theory is most useful in the 21st century to meet the goals you have in your workplace or educational setting? How is technology used to facilitate meeting these goals?  In my work place (CAI-Lab) the theories of Skinner, Keller and Piaget are most useful. The technology is in a constant state of change to meet the needs of the students and teachers in the environment of the computer assisted instruction. Upgrades are frequent and monitoring the student achievement levels are very necessary to analyzation of programs available to adult students and teachers. Dependence on upgrades depends on unified upgrades of both software and hardware, due to added features in software and servers that can accommodate them. | | |